REMARKS

Claims 1-13, all the claims pending in the application, stand rejected. Applicant has amended claim 7 in order to overcome objections by the Examiner and rejections under 35 U.S.C. § 112. Applicant has added new claim 14. Applicant believes none of the cited references, alone or in combination, shows the features recited in the claims.

Drawings

The Examiner objects to the drawings under 37 C.F.R. § 1.183(a) because they do not show several features of the invention that are specified in the claims:

First, the Examiner comments that the Figures do not illustrate the features of claim 7, specifically, nozzles from which air is blown towards the bottom face of the self-propelled member to form an air bearing layer between the bottom face and the traveling field to support the self-propelled member thereon.. According to the specification, Fig. 12 relates to a third embodiment of the invention, wherein an air bearing is adopted. The description of Fig. 12 at page 18 of the specification describes a nozzle formed in substantially the center of the lower face of the self-propelled member 70 such that air is caused to flow in every direction along the lower face of the self-propelled member 70 to allow the member 70 to travel considerably smoothly and freely with agility in every direction. The combination of the description at page 18 and the claim clearly defines to one skilled in the art the manner in which this feature may be implemented.

Similarly, with regard to claim 8, the Examiner notes that the Figures do not show a skirt member formed on a peripheral portion of the bottom face of the self-propelled member. This structure is expressly taught at page 22, lines 13-18.

Finally, the Examiner does not find in the Figures the features of claim 9, whcih requires a compressor for blowing compressed air toward the traveling field through nozzles formed on the bottom surface of the self-propelled member.

In order to comply with the drawing requirement with regard to claims 7 and 8, and mindful of the prohibition against the addition of new matter, Applicant has added new Figure 12A. The new Figure illustrates a configuration that air from a compressor is blown toward the bottom of the self-propelled member provided with a skirt member. Furthermore, a description

of the figure is provided after the line 1, page 19 of the specification as fled. The specification and the claims provide adequate support for the illustration. The Figure does not contain detail that is not already in the original disclosure. Applicant respectfully submits that it has not gone beyond the subject matter that is expressly disclosed and understood by one skilled in the art.

With regard to claim 9, Applicant respectfully submits that a compressor is illustrated in Fig. 12. The new Fig. 12A more clearly illustrates such structure, in an environment as orignally disclosed in the specification.

Specification

The Examiner objects to the specification because of certain typographical errors. Applicant has corrected this error.

Claim Objections

Claim 7 is objected to because of a misspelling. Applicant has corrected this error by changing the word "brown" to "blown".

Claim Rejections - 35 U.S.C. § 112

Claims 7-9 are rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. The Examiner asserts that the specification does not show how one of ordinary skill in the art could modify the racing game to incorporate air being blown towards the bottom face of the self-propelled member on the traveling field.

In reply, Applicant respectfully submits that the original disclosure in the specification with regard to Figure 12, and the original claims, clearly support these limitations. In order to comply with the requirements of 37 C.F.R. § 1.183(a), Applicant has prepared simple schematic drawings consistent with the disclosure in the specification and claims as originally filed. Applicant also has added a description of the figure at page 19. Applicant respectfully submits that no new matter is added.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 3-4 and 10-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa et al (5,601,490) in view of Sutoki (JP 9261944). This rejection is traversed for at least the following reasons.

As set forth in claim 1 and with reference to the exemplary embodiment in Figs. 2 and 7, the invention involves a racing game machine comprising a racing track 100, a traveling field 90

on which platen dots 11a are provided below the racing track, a plurality of self-propelled members 70 provided on the traveling field, and a plurality of miniature members 101 which are provided on the racing track 100. Notably, the self-propelled members 70 have first yokes 12, second yokes 13 that serve as linear motors and are provided on the traveling field 90. The plurality of miniature members 101 are provided on the racing track 100. Each miniature member 101 has front wheels 103 and rear wheels 104, the front wheels being provided as caster wheels. Further, first magnets 83 are provided on the self propelled members and magnetically engage with second magnets that are provided on the miniature members at the front side of the caster wheels.

Nakagawa et al

Nakagawa et al illustrates a racing game arrangement having a track 6 over which a miniature member 7 is moved. Nakagawa also uses an underlying track 9 comprising a conduction plate 12 having conductor lines 11 and a plate 10 on which a movable member 8 is supported. The moveable member 8 is driven along the track 9 by a motor M mounted on a truck 17, and a torque is transmitted to rear wheels 20, 20' by a mechanical drive mechanism 22-24. The truck 17 carries an extendable support member 19 having at its top end a magnet unit 18, which can engage the magnet on the miniature member 7.

Notably, the miniature member 7 does not have front and rear wheels as claimed, or a second magnet in a position as claimed. Specifically, in the application, the miniature member 101 has front caster wheels 103 and rear wheels 104, and a magnet 102 at the front side of the caster wheels for having the member run on track 100. This structure provides a realistic simulation of a movement of miniature members in a race environment since the lateral and turning capability of the members is provided by the casters and the mounting of the magnet in front of the casters. Moreover, it allows the miniature member to follow the highly agile movements of the self propelled member. By contrast, Nakagawa et al has a vehicle 7 with wheels that have no casters and have magnets 701, 702 disposed at the center of the vehicle. Such structure would not provide the same agility and realistic movement as the present invention.

Also, there is no first or second yoke on the moveable member 8 that serves as a linear motor; Nakagawa et al uses only a conventional motor M.

Further, the running track 9 in Nakagawa et al does not have platen dots, as claimed. In the present invention, below the race track 100 is a track field 90 on which platen dots are provided and on which a plurality of self-propelled members 70 can travel in response to signals provided to a first yoke and a second yoke, as illustrated in Figs. 1-4. Nakagawa et al teaches the use of a conduction plate 10 that constitutes a supplying line acting as a positive electrode and conductor lines 11 that act as a negative electrode. The arrangement in Nakagawa provides power directly to the motor M, which is not a linear motor.

In short, the structure of the miniature members, the driving members and the tracks are completely different from that of the claimed invention, and is evident from a comparison of Fig. 3 of the reference and Fig. 7 of the present application. The Examiner admits to these deficiencies in Nakagawa et al with respect to the invention as set forth in claims 1, 3 and 4.

The Examiner looks to Sutoki for a teaching of such structures in a published application that is directed to a three phase planar linear motor that facilitates smooth movement in X- and Y-directions.

Sutoki

The Examiner asserts that Sutoki teaches a surface with platen dots and a yoke structure, as claimed, particularly with reference to Figs. 2-5 and 9. The Examiner asserts that one of ordinary skill in the art would modify Nakagawa to include the structure of Sutoki to provide smooth movement of the member in Nakagawa in the X- and Y-directions.

Sutoki is deficient in several respects.

First, Sutoki fails to provide any teaching with respect to a racing game, miniature member structure or self propelled member, or how the disclosed platen dot an linear motor structures may be applied to a game environment, as in the presently claimed invention.

Second, there is nothing in either reference that would teach or suggest the adaptation of the Sutoki structure to a game as in Nakagawa et al, and certainly nothing that would lead to the arrangement as claimed. The substitution of platen dots for control wires 11 involves a wholly different technique for driving the self-propelled members and accompanying miniature members that would not be obvious to one skilled in the art. The wires are laid out in a predetermined path, for example, a racing track, and the self propelled members must follow that path. Of course, there are lane-changing regions, but the self propelled members are generally

confined to the path. By contrast, the present invention is based on a more realistic implementation of a miniature model movement and permits a variable path that is not predetermined. There is no teaching in Sutoki as to how its structure may be applied to games having predetermined paths to achieve a variable path structure as disclosed and claimed in the present application.

Claims 2 and 5-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa '490 in view of Sutoki JP '944 as applied to claim 1 and further in view of Helm (4,066,021). This rejection is traversed for at least the following reasons.

Helm is cited for it's teaching of ball bearings provided at the bottom face of the self propelled member to assist the propelling on the traveling field. The Examiner asserts that Helm teaches such ball bearings. However, Helm fails to remedy the deficiencies of the combination of Nakagawa and Sutoki. Further, Nakagawa et al and Helm are directed to wholly different environments, with Nakagawa et al directed to a game device while Helm is directed to a high speed transportation system. The two environments involve wholly different structures, voltages, masses, load considerations and speeds. These differences are so significant that they would mitigate against one of ordinary skill considering the transportation system of Helm in the environment of a game as disclosed in Nakagawa et al. Since Helm does not remedy the deficiencies of Nakagawa et al and Sutoki and is not combinable with them, this rejection should be overcome.

Claims 6 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa '490 in view of Sutoki JP '944 and Helm '021 as applied to claims 1-2 and further in view of Li (4,618,271). This rejection is traversed for at least the following reasons.

Li

Li is cited for its teaching of ball bearings in an annular retainer. The disclosure of a ball bearing support within an annular retainer to form a thrust bearing, as disclosed in Li, would not be applicable to the combination of references as provided by the Examiner. One need only look to the incompatibility of the high speed transportation system in Helm and the miniature structures in Nakagawa et al to understand that the ball bearings of Lee mitigate against the combination of teachings of a full scale transportation system structure in a game environment. Li concerns the structure of speed distribution planetary gears, and represents yet another

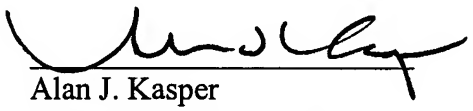
structure and environment that differs significantly from games and high speed commercial trains. It would require the use of hindsight for the Examiner to arrive at the claimed invention on the basis of the combination of teachings in the four cited references.

On the basis of the foregoing comments, Applicant respectfully submits that the rejections should be overcome on the basis of (1) the failure of the combination of references to teach all the claim limitations, (2) the failure of the references to teach the combination of limitations in the claimed game environment, and (3) the incompatibility of the references.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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